

BMP #3 - Preservation of Existing Vegetation

Targeted Pollutants

- ☒ Sediment
- ☐ Phosphorus
- ☐ Trace metals
- ☐ Bacteria
- ☐ Petroleum hydrocarbons

Physical Limits

Drainage area unlimited
Max slope unlimited
Min bedrock depth N/A
Min water table N/A
SCS soil type ABCD
Freeze/Thaw good
Drainage/Flood control no

DESCRIPTION

Protect existing vegetation (including trees, grasses, and other plants) by preventing disturbance or damage to specified areas of a construction site or right-of-way. Preserving natural vegetation provides buffer zones and stabilized areas which help control erosion, protect water quality, and enhance aesthetic benefits. This practice minimizes the amount of bare soil exposed to erosive forces.

APPLICATIONS

This technique is applicable to all types of sites. Areas where preserving vegetation can be particularly beneficial are floodplains, wetlands, stream banks, steep slopes, and other areas where other structural erosion controls would be difficult to establish, install, or maintain. Compared to newly planted or seeded areas, preserving natural vegetation has many advantages:

- It can handle higher quantities of storm water runoff than newly seeded areas.
- It does not require time to establish (it is effective immediately).
- It has greater filtering capacity because the vegetation and root structure are usually denser in preserved natural vegetation than in newly seeded or base areas.

- It usually requires less maintenance, watering, and chemical application (e.g., fertilizer, pesticides) than planting new vegetation.

It also:

- Enhances aesthetics.
- Provides areas for infiltration, thus reducing the quantity and velocity of storm water runoff.
- Allows areas where wildlife can remain undisturbed.
- Provides noise buffers and screens for on-site operations.

LIMITATIONS

Preservation of natural vegetation may be impractical in some situations because:

- It may constrict the area available for construction activities.
- It may not be cost-effective in areas with high land values.

DESIGN PARAMETERS

- Successful preservation of vegetation requires good planning and site management to minimize the impact of construction activities on existing vegetation. The areas to be preserved should be identified in the plans and clearly marked in the field before any site disturbance begins. Clearly

mark all trees to be preserved, and protect against ground disturbance within the dripline of each marked tree as shown on the attached figure. The dripline marks the edge of the tree's foliage where drips from rainfall would drop. Most of the tree's roots lie within the dripline and are vulnerable to damage.

- Preserving natural vegetation may affect some aspects of staging, work sequencing, and construction cost. In addition, control measures may be needed around the perimeter of the preserved area to maintain adequate water flow and drainage and to prevent damage from excessive erosion or sedimentation. Be sure to consider these and related factors when preparing the project site plan and project cost estimates.
- Consider the use of design exceptions to enable preservation of natural vegetation in certain areas where it would typically be removed and where its preservation would not pose safety problems.

CONSTRUCTION GUIDELINES

- Check the project plans for areas designated for preservation of natural vegetation. Keep all construction equipment, materials, and waste out of the designated areas.
- Do not modify existing drainage patterns through or into any preservation area unless specifically directed by the plans or approved by the local permitting authority.
- Perform maintenance activities as needed to ensure that the vegetation remains healthy and able to aid in erosion control and sediment collection.

MAINTENANCE

Inspect at regular intervals to make sure the preserved vegetated areas remain undisturbed and are not being overwhelmed by sediment. Implement maintenance or restorative actions as needed. Proper maintenance is important to ensure healthy vegetation that can control erosion. Different species, soil types, and climatic conditions will require different maintenance activities such as mowing. Maintenance should be performed regularly, especially during construction.